-DRB1 haplotypes on low/intermediate resolution level are considered, the corresponding values are 85.0% and 97.2%.

These results quantify the decrease in matching probabilities through more elaborated matching criteria. Significant further recruitment efforts are necessary to maintain high probabilites to find optimal donors as the criteria for optimal donors become more demanding.

AUTOLOGOUS TRANSPLANTS

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AMD3100 PLUS G-CSF MOBILIZES THE MAJORITY OF NON-HODGKIN'S LYMPHOMA (NHL), MULTIPLE MYELOMA (MM), AND HODGKIN'S DISEASE (HD) PATIENTS WHO FAILED PRIOR MOBILIZATION WITH OTHER REGIMENS

Calandra, G.[1], McCarty, J.[2], McGuirk, J.[3], Barlogie, B.[4], Crocker, S.-A.[1], Badel, K.[1] [1]AnorMED, Langley, BC, Canada; [2]BMT Program - Virginia Commonwealth University, Richmond, VA; [3]BMT Program - Kansas City Cancer Centers, Kansas City, MO; [4]Myeloma Institute - University of Arkansas, Little Rock, AR.

Background: AMD3100, an inhibitor of SDF1 binding to CXCR4, synergizes with G-CSF to allow mobilization of sufficient CD34+ cells/kg for autologous transplantation in pts unable to collect adequate CD34+ cells with G-CSF alone. A single pt use (SPU) protocol for AMD3100 was adopted for >1 pt entry per site and termed Compassionate Use Protocol (CUP). The only difference of standard of care was the addition of AMD3100 to a G-CSF mobilization on the evening prior to each day of apheresis. Pts who could not proceed to apheresis due to low peripheral blood counts or pts who did not collect a minimum of 2 × 10^6 CD34+ cell/kg were eligible. **Methods:** Overall, more than 280 patients with proven poor mobilization including 137 NHL, 73 MM, and 31 HD have been included in CUP. A data audit was performed to validate data from these pts. Sites were selected based on most patients entered, >3 of all diseases entered at a site, and sites conducting an AMD3100 trial. Audit included all pts, regardless of of the outcome; all information was collected on CRFs. Success of outcome was collection of 2×10^6 CD34+ cells/kg during the CUP procedure. CUP apheresis was done on day 5 after G-CSF (10mg/kg SC QD) and AMD3100 (240mg/kg SC Q10 PM) starting day 4. **Results:** Charts and CRFs were available for review for 115 pts; 63 (55%) were NHL patients from 29 sites, 35 (30%) were MM from 23 sites and 17 (15%) were HD from 13 sites. Of these pts, 58% were male, the median age was 59 yrs (range 21-77), 88% were Caucasian, and pt weight ranged from 43-128 kg. Prior treatments included a median of 2 regimens of chemotherapy in each of the 3 groups. Safety was generally favorable with no drug-related SAE s and with an AE profile similar to that seen in research trials. The rates of successful collection of 2×10^6 CD34+ cells/kg per disease state as well as prior mobilization regimen are summarized in table 1. The median number of mobilizations for the successful patients was 3 days for NHL and HD and 4 for MM. 88 of the patients underwent transplantation with any cells; of the 47 NHL patients transplanted, 24 had CUP only cells and 23 had mixed cells. The median number of days to engraftment was 11 for PMN and 18 for platelets. Long term follow up is limited, but there do not appear to be graft failures. At least 12 of the pts have died. **Conclusions:** AMD3100 in a poor mobilizer population is generally safe and well tolerated and is very effective in mobilizing > 2×10^6 CD34+ cells/kg.

Mobilization success rate by disease state: overall and prior mobilization regimen

	Overall	Prior Cytokine	Prior Chemotherapy
NHL	60%	53%	68%
HD	76%	78%	75%
MM	71%	73%	71%

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KINETICS OF AUTOLOGOUS STEM CELL MOBILIZATION FAILURE: COMPARISON OF AMD3100/G-CSF, G-CSF, GM-/G-CSF, AND CHEMOTHERAPY/G-CSF ON REMOBILIZATION SUCCESS

DiPersio, J.F.[1], Smith, A.[2], Sempek, D.[2], Baker, A.[2], Jiang, S.[3], Vij, P.[1], Cashen, A.[1], Westervelt, P.[1] [1]Washington University, St. Louis, MO; [2]Barnes-Jewish Hospital, St. Louis, MO; [3]University of British Columbia, Vancouver, BC, Canada.

Background: No standard approach for the mobilization of peripheral hematologic stem and progenitor cells (HSPCs) has been established. High levels of circulating CD34+ cells, a surrogate marker for mobilization efficiency, are associated with less apheresis days. A higher dose of CD34+ cell transfused after high-dose chemotherapy decreases time to hematologic recovery. Consequently, a better understanding of variables associated with mobilization kinetics may further optimize stem cell collection and reduce complications associated with autologous stem cell transplants. **Methods:** The Washington University (St. Louis, MO) transplantation database includes clinical parameters from 407 multiple myeloma (MM), 567 non-Hodgkins Lymphoma (NHL), and 164 Hodgkin s disease (HD) pts who received an ASCT between 1995 and 2006. A retrospective analysis of this large pt population was conducted to determine factors associated with the mobilization kinetics of CD34+ cells. **Results:** Table 1 summarizes the mobilization kinetics as defined by number of days to reach a target of 2 × 10^6 CD34+ cells/kg. Overall, the median number of aphereses to reach the target were 1, 2, and 2 in MM, NHL, and HD, respectively. Daily median CD34+ yields in MM pts were 3.8, 1.2, and 0.5 × 10^6 on day 1-3, respectively. In NHL pts, yields were 1.4, 0.8, and 0.4 × 10^6 on day 1-3. In HD pts, yields were 1.8, 0.8, and 0.3 × 10^6 on day 1-3, respectively. The addition of chemotherapy increased the % of pts requiring only a single apheresis to reach the mobilization target. Table 2 summarizes the mobilization kinetics for each re-mobilization regimen. In general, a limited number of cells was collected with each aphereses; >70% of pts failed to mobilize 2 × 10^6 CD34+ cells/kg. In contrast, remobilization with AMD3100 allowed the collection of sufficient CD34+ cells in 67% of pts; median number of apheresis to reach the target was 3. **Conclusions:** Factors associated with mobilization kinetics of CD34+ cells include disease state and mobilization regimen. Re-mobilization is associated with high failure rates, re-mobilization regimens including AMD3100 are more successful.

Mobilization kinetics by (1) disease state, and (2) re-mobilization regimen

Table 1	> 2×10^6 CD34+/kg:	Day 1	Day 2	Day 3-5	Failed
MM	G-CSF	59.3%	17.9%	16.3%	6.5%
	G-CSF/Chemo	88.2%	0%	5.9%	5.9%
NHL	G-CSF	29.7%	20.6%	23.2%	26.5%
	G-CSF/Chemo	42.9%	22.8%	11.4%	22.9%
HD	G-CSF	32.3%	23.9%	17.6%	26.2%
	G-CSF/Chemo	33.3%	25.0%	25.0%	16.7%

Table 2	> 2×10^6 CD34+/kg:	Day 1	Day 2	Day 3-5	Failed
	G-CSF	2.3%	5.7%	6.3%	85.7%
	G-CSF/GM	4.8%	7.9%	14.3%	73%
	G-CSF/Chemo	4.5%	13.7%	6.8%	75%
	AMD3100	12.5%	25.0%	29.5%	33%